

A new genus and species of *Scirtothrips* genus-group (Thysanoptera: Thripidae) from Kenya, intercepted by Australian quarantine

LAURENCE A. MOUND

Honorary Research Fellow, Australian National Insect Collection, CSIRO Entomology, GPO Box 1700, Canberra, ACT 2601
Australia. E-mail: laurence.mound@csiro.au

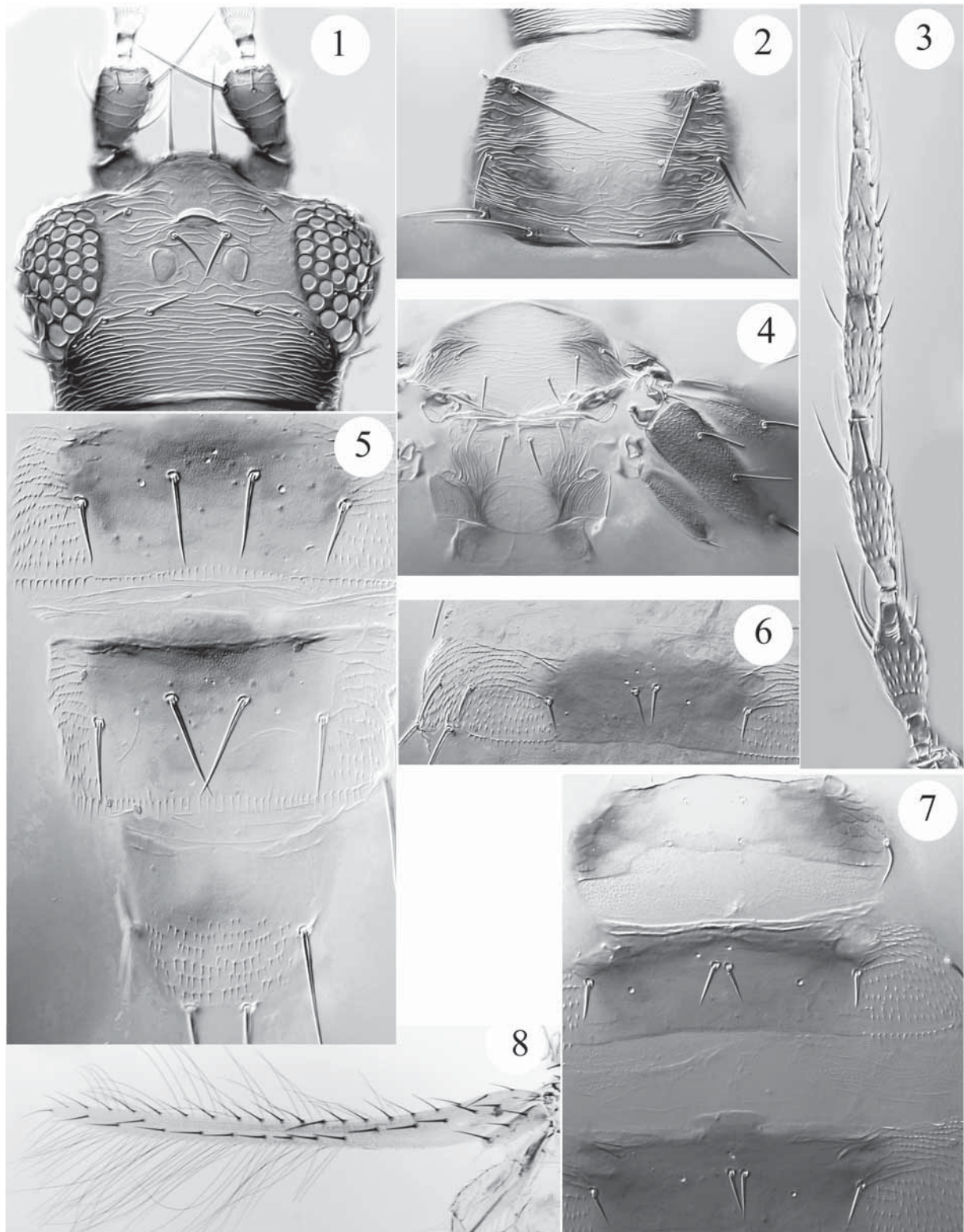
The thrips species described here has been taken repetitively in recent years by the Australian Quarantine and Inspection Service on fresh leaves imported from Kenya. The leaves involved are of *Catha edulis* (Celastraceae), a plant that is used as a mild stimulant, particularly in countries near the Horn of Africa between Kenya and the Yemen. The leaves are either chewed fresh or made into a beverage, and the plant is commonly known as “khat” or “qat”. Leaves of this plant imported into Australia have been found commonly to bear larvae and pupae, and more rarely adults, of an interesting species of Thripinae. Although clearly a member of the *Scirtothrips* genus-group (Masumoto & Okajima, 2007), the species represents a previously undescribed genus. The host range of this species is at present unknown, however Dr Subramanian Sevgan of ICIPE, Kenya, kindly e-mailed photomicrographs of this thrips (19 May 2009) and confirmed that the species had been collected from *Catha edulis* in that country. Although possibly host specific, this new species must continue to be considered a potential hazard by Australian quarantine, because so many species of *Scirtothrips* are highly polyphagous and pestiferous. Moreover, on the same imported leaves larvae and adults of a *Scirtothrips* species also have been taken several times, but this species remains unidentifiable due to the absence of any modern information on the African fauna of *Scirtothrips*. This article describes the new genus and species, with comparisons to related taxa. Nomenclatural details of all taxa mentioned here are given in the web-available world catalogue of Thysanoptera (Mound, 2009). The new names reflect the Kenyan origin of the specimens studied, and the contribution of Katarina Graljuk who first intercepted the species in Australia, and who with her colleagues at the Australian Quarantine and Inspection Service help prevent invasive organisms from entering and harming Australian agriculture and ecosystems.

Kenyattathrips gen n.

Antennae 7-segmented, segments III and IV with sensorium forked (Fig. 3); segment II with inner dorsal apical seta very long (Fig. 1). Head with ocellar setae I long, arising far forward on broad inter-antennal projection; compound eyes with no pigmented facets; vertex closely striate; maxillary palps 3-segmented but segment I small (Fig. 9). Pronotum with four pairs of posteromarginal setae (Fig. 2), pair I arising sub-marginally, II and III very long, IV minute; anteromarginal setae very long; discal area transversely striate, without discal setae. Mesonotal sub-median setae arise anterior to median pair (Fig. 4). Metanotum weakly reticulate medially, median setae not at anterior margin. Prosternal ferna almost complete; prospinasternum small (Fig. 9); mesosternopleural sutures absent; meso and metasternal endofurca with prominent spinula. Forewing first vein with about 5 basal and 2 distal setae, second vein with 7 to 8 setae (Fig. 8); clavus with 3 veinal but no discal setae (Fig. 4); posteromarginal cilia wavy. Tergite I medially with pair of campaniform sensilla and one pair of minute setae, no microtrichia laterally; tergites II–VI with S1 longer than distance between their bases, regular rows of microtrichia on lateral thirds (Fig. 7); tergites VII–VIII with setae S1 longer and further apart, posterior margins of VII and VIII with complete comb (Fig. 5); IX with many microtrichia on posterior half, no campaniform sensilla; tergite X with no median split nor microtrichia. Sternites transversely reticulate, with no microtrichia; marginal setae arise in front of margin on V–VII; pleurotergites and pleurosternites not developed as independent sclerites (Figs 6,10). Male smaller than female, abdomen without drepanae on tergite IX, and without sternal pore plates. Larva II with many dorsal setae capitate (Figs 11, 12).

Type-species. *Kenyattathrips katarinae* sp.n.

Relationships. The *Scirtothrips* genus-group comprises ten genera. Of these, *Scirtothrips* includes 100 species worldwide (Hoddle & Mound, 2003), *Anascirtothrips* includes four Asian species that are associated with the leaves of *Ficus* (Masumoto & Okajima, 2007), *Cercyothrips* includes two Neotropical species (Mound & Marullo, 1996), but the

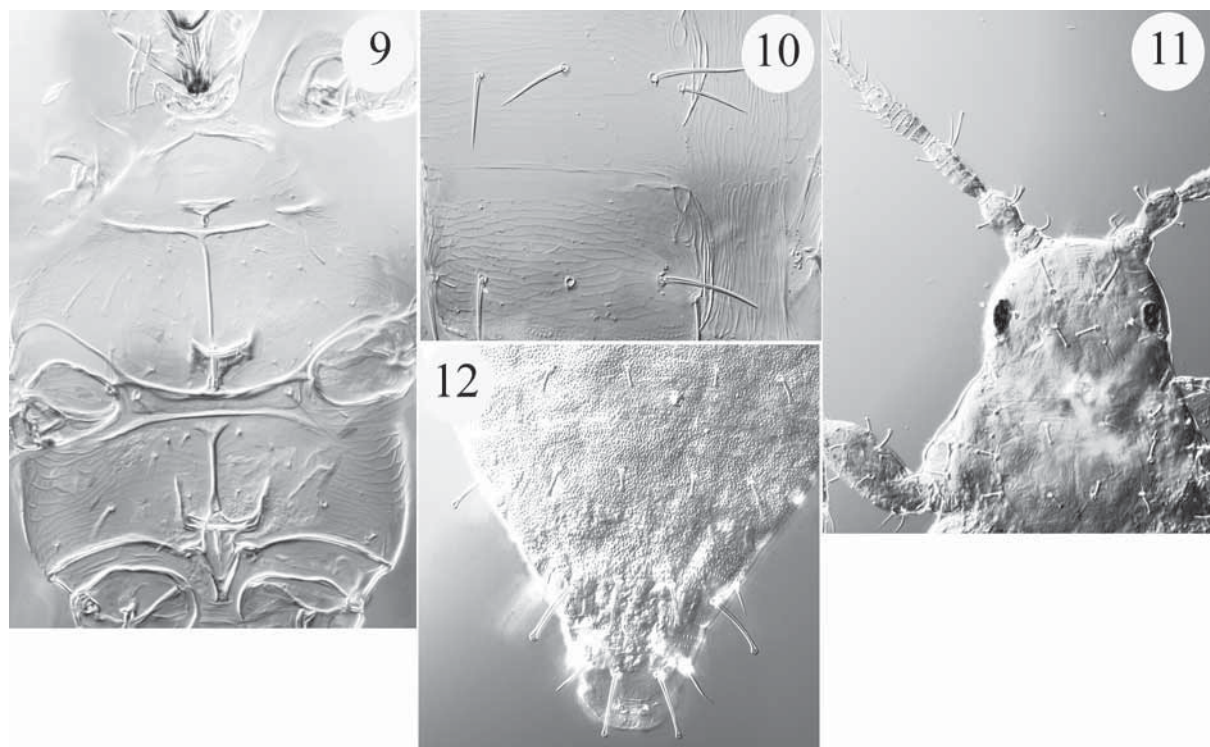


FIGURES 1–8. *Kenyattathrips katarinae*. (1) Head. (2) Pronotum. (3) Antennal segments III–VII. (4) Mesonotum, metanotum and forewing clavus. (5) Tergites VII–IX. (6) Tergite V. (7) Tergites I–III (8) Forewing.

other seven genera each comprise a single species. These are *Biltothrips* and *Siamothrips* from the Oriental region, *Parascirtothrips* from Honshu in Japan, *Scirtidothrips* from the Neotropical region, *Ephedrothrips* from Morocco, *Kenyattathrips* from Kenya, and *Sericopsithrips* that is known only from one female taken in New York. The character states that are shared by these members of the *Scirtothrips* genus-group are listed by Masumoto & Okajima (2007).

Kenyattathrips shares most of these character states, although the pronotum bears two pairs of long posteromarginal setae and one pair of long anteromarginal setae (Fig. 2), and the forewing second vein has an almost continuous row of setae (Fig. 8).

Species in the *Scirtothrips* genus-group usually lack long setae on the pronotum, although both *Scirtidothrips* and *Sericopsothrips* are described as having one pair of long posteromarginal setae, and several species of *Scirtothrips* have one pair moderately developed. No other member of this genus-group has a pair of long setae on the anterior margin of the pronotum, nor such long posteromarginals, and most other species in the group have 8-segmented antennae. *Kenyattathrips* is remarkable for the exceptionally long seta at the inner apex of the second antennal segment, the long ocellar setae pair I placed far forward on the inter-antennal projection, the anterior position of the sub-median setae on the mesonotum, the presence of a complete marginal comb on tergites VII and VIII, the lack of a discal seta on the forewing clavus, and the almost complete row of setae on the second vein.



FIGURES 9–12. *Kenyattathrips katarinae*. (9) Meso and metasterna. (10) Sternites VI–VII (11) Larva II head. (12) Larva II abdomen.

Kenyattathrips katarinae sp.n.

Female macroptera. Body bicoloured; head yellow medially, brown on anterior margin and posterolaterally; pronotal lateral thirds brown, yellow medially; meso and metanota with light brown markings laterally; legs yellow; tergites II–VIII brown medially but yellow laterally, tergal lateral setae dark, also terminal setae of abdomen; forewing including clavus dark brown, paler toward apex; antennae mainly brown, segments III–IV yellow at base.

Head broad across eyes, ocellar setae III small and arising on anterior margins of ocellar triangle; maxillary palp with basal segment small and pale. Antennal segment II with few and weak microtrichia dorsally; III and IV with apical neck; inner sensorium on VI extending almost to apex of VII. Metanotal median setae arise behind margin, scarcely longer than lateral pair but stouter. Tergites with no sculpture mesad of setae S2; laterally with at least 12 rows of microtrichia.

Measurements (holotype female in microns). Body length 1400. Head, length 125; width across eyes 185; ocellar setae I 50; ocellar setae III 25. Pronotum, length 100; width 190; anteromarginal setae 65; posteromarginal setae 25, 70, 65, 15. Tergal setae S1, on I 5; on II 20; on VII 40. Forewing, length 800. Antennal segments I–VII 20, 45, 65, 65, 50, 65, 40.

Male macroptera. Similar to female in structure and colour, but abdomen paler.

Larvae II. Surface of abdomen and thorax, but including only median area of pronotum, finely granulate (Figs 11, 12), remainder of pronotum smooth; on tergite IX the granulation grades into sharply pointed microtrichia at posterior; major setae capitate; head unusually broad.

Specimens examined. Holotype female, **Kenya**, taken in quarantine at Melbourne, Australia, on leaves of *Catha edulis*, 2.vi.2009 (AQIS 002971), in the Natural History Museum, London.

Paratypes: 5 females with similar data except, 24.ii.2009, 31.iii.2009, 12.v.2009, 26.v.2009; 2 males with similar data 17.v.2002. Paratype specimens will be deposited in London, also in the Kenya Museum, Nairobi and the Australian National Insect Collection, Canberra.

Comments. More than 10 immature specimens, including second instar larvae as well as both pupal instars, have also been intercepted by Australian quarantine together with the adults on the leaves of *Catha*. It is therefore evident that this is a plant on which this thrips breeds, but this should not be taken as evidence that the thrips is host specific.

Acknowledgements

I am grateful to Luke Watson at AQIS who recognized that this was an unusual thrips being intercepted, and submitted specimens with a request for further clarification on its identity. The photomicrographs were taken using a Leica DM2500 Differential Interference Contrast microscope, the digital images being processed with Automontage software.

References

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